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Background Information and  
Optional Management Strategies

**Fort Frances District  
Fisheries Management Plan**

1985 to 2000

A Summary



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Optional Management Strategies

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FORT FRANCES DISTRICT  
FISHERIES MANAGEMENT PLAN

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## INTRODUCTION

### PURPOSE

The purpose of fisheries management planning is to identify both long term management direction and specific short term (5 year) management actions for fisheries within the Fort Frances district. A district fisheries management plan will implement strategic program policy direction (District Land Use Guidelines) and test it through detailed resource analysis. It will provide the basis for revisions to strategic policy where appropriate, and will describe how the strategic program direction will be carried out.

The purpose of this document is to summarize the resource information contained in the detailed background information document and to introduce optional management strategies and tactics.

### PLANNING AREA

Information herein pertains to waterbodies within the Fort Frances administrative district of the Ontario Ministry of Natural Resources (Figure 1).

### PLANNING PROCESS

The development of a fisheries management plan for the Fort Frances District will represent the final product of a seven stage systematic planning approach described as follows:

Stage 1: Preparation of Terms of Reference;

Stage 2: Identification of Objectives and Targets;

Stage 3: Collection and Analysis of Background Information,  
Identification of Problems and Issues.

Stage 4: Identification of Optional Fisheries Management Strategies and Selection of Preferred Options;

Stage 5: Development of a Summary Document;

Stage 6: Development of a Draft Fisheries Management Plan;

Stage 7: Development of a Final Management Plan.

The public will have an opportunity to review and comment on the documents produced during stages 3 through 6.

### DETAILED BACKGROUND INFORMATION DOCUMENT

The detailed background information document contains information on fisheries resources, users, level of resource use and problems and issues in managing district fisheries resources. This document is available for public review at the district office.



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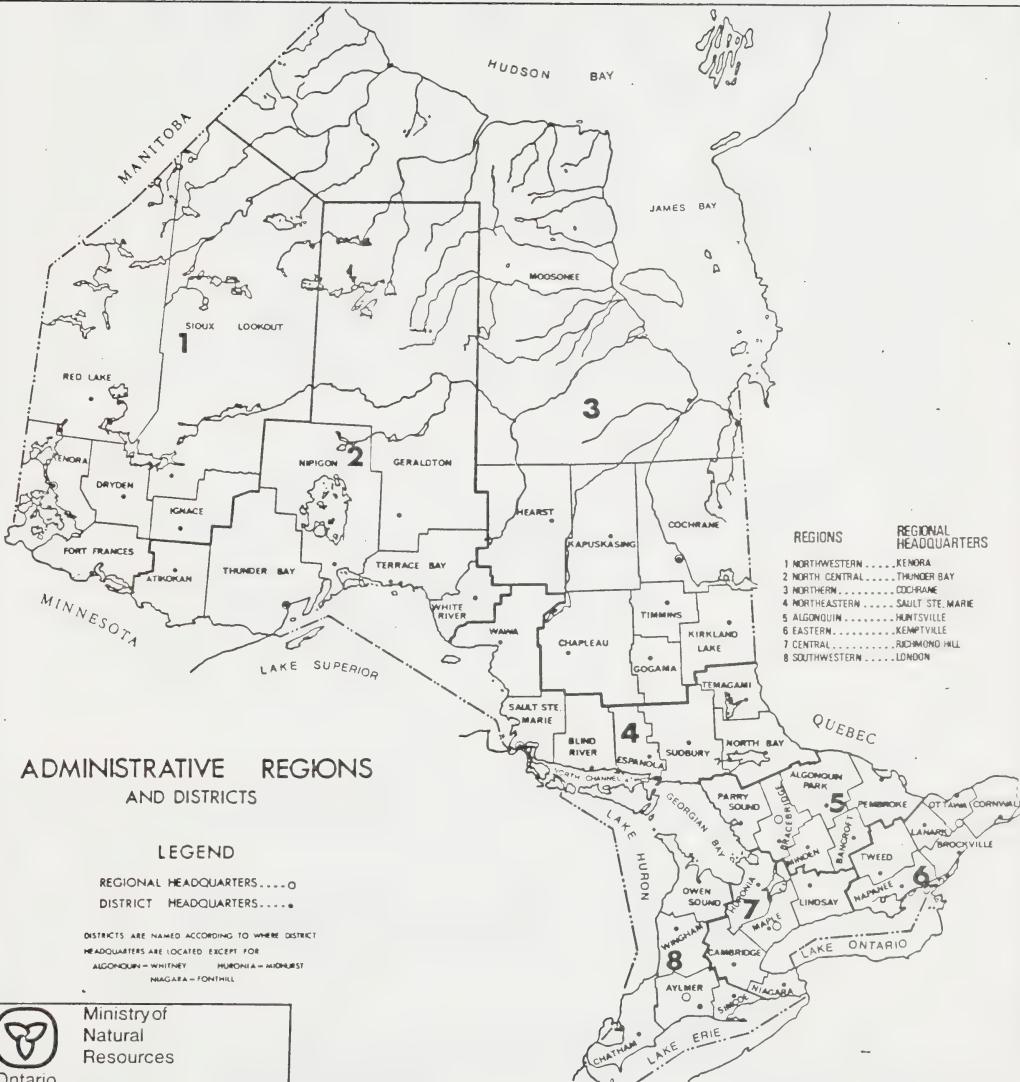


Figure 1



Ministry of  
Natural  
Resources  
Ontario



## BACKGROUND INFORMATION

### THE RESOURCE

There are 3,240 lakes within the district with a total surface area of 233,200 hectares. Rainy Lake is the most prominent waterbody comprising 30 percent of the total lake surface area. There are 85 known coldwater lakes of which 73 have been surveyed and 135 known warmwater lakes of which 81 have been surveyed (Figure 2). In total, 64.8% of the lake surface area has been surveyed. In addition, there are 14 major rivers located within the district.

The major fish species inhabiting lakes and rivers in the district are walleye, northern pike, muskellunge, lake whitefish, lake trout, black crappie, yellow perch, smallmouth bass, largemouth bass and lake sturgeon.

The potential yield of all waterbodies within the District is 626,813 kg/yr. Rainy Lake is estimated to produce 190,539 kg/yr or 30 % of the total district yield (Table 1). Potential yields for walleye, northern pike/muskellunge, whitefish, crappie, smallmouth/largemouth bass and lake trout comprise 22, 21, 11, 8, 7 and 5 percent of the total yield respectively.

### RESOURCE USERS

Key users of the fisheries resources in the Fort Frances district are as follows (arranged in alphabetical order):

- i) anglers - resident - residents of Ontario  
non-residents - residents of U.S.A.
- (ii) commercial fishermen (bait)
- iii) commercial fishermen (food)
- iv) native people
- (v) tourist operators

#### Anglers

The major sport fish species sought by anglers in the district are: walleye, northern pike, lake trout, smallmouth bass and black crappie. The preferred warmwater and coldwater species are walleye and lake trout respectively.

Approximately 86% of the anglers using district lakes are non-residents. The number of non-residents fishing in the northwestern region appears to have increased steadily since 1970.

#### Commercial Fishermen (Bait)

There are currently 107 baitfish harvest blocks in the Fort Frances district. The blocks were allocated to 56 baitfish licencees in 1984. Species harvested include: fathead minnows, pearl dace, finescale dace, northern redbelly dace, spottail shiners, emerald shiners and white suckers.



## Figure 2 MNR Surveyed Lakes





TABLE 1: SUMMARY OF FISHERIES POTENTIAL

	AREA (HA)	POTENTIAL YIELD (KG/YR)		
DISTRICT WATERS	231,600	626,813		
SURVEYED LAKES				
RAINY LAKE	70,100	190,539		
OTHER LAKES	98,400	234,167		
TOTAL	168,500	424,706		
UNSURVEYED LAKES	63,100	202,107		
YIELD KG/YR	RAINY LAKE	SURVEYED LAKES	PARTIALLY SURVEYED LAKES	UNSURVEYED LAKES
LAKE TROUT		29,267		837
BROOK TROUT		14		14
LAKE WHITEFISH	36.202	22,229		12,191
WALLEYE	47.825	24,861	6,376	51,238
NORTHERN PIKE	36.202	42,039	5,053	45,072
CRAPPIE	51.446			161,007
SMALLMOUTH BASS		22,030	2,383	17,307
YELLOW PERCH	19,054	21,526		40,580
RESIDUAL		33,587	14,897	71,771
TOTAL	190,539	205,553	28,614	202,107
				626,813



## Commercial Fishermen (Food)

In 1984, there were nine waterbodies commercially fished in the Fort Frances district:

(i)	Bad Vermillion Lake	1 Licence non-native
(ii)	Esox Lake	1 Licence non-native
(iii)	Jackfish Lake	1 Licence native
(iv)	Lower Manitou Lake	1 Licence non-native
(v)	Mount/Pettit Lakes	1 Licence non-native
(vi)	Namakan Lake	3 Licences non-native
(vii)	Rainy River	1 Licence native
(viii)	Seine River	1 Licence native
(ix)	Rainy Lake	13 Licences 12 non-native 1 native

Species harvested include: walleye, northern pike, lake whitefish, lake sturgeon, yellow perch and black crappie. White suckers, cisco and burbot are taken incidentally.

## Native People

Seven of the 13 reserves located within the district are inhabited (1,437 people). Rainy Lake is utilized by Redgut Bay 26A, 26B, 26C, Northwest Bay 17A, Stanjikoming Bay 16A, 18C and Seine River 23A reserves for subsistence fishing. Only half of the fish harvested by the Seine River 23A is thought to be taken from Rainy Lake. Approximately 60% of the district's native population rely on Rainy Lake for subsistence fishing. Manitou Rapids 11 uses Rainy River, Northwest Bay 17B uses the Manomin River, Seine River 23B and Sturgeon Falls 23 use the Seine River for subsistence fishing.

## Tourist Operators

There are currently 76 commercial lodges operating in the district with guest capacities ranging from 20 to 60 each. Rainy Lake currently supports 18 commercial lodges. In addition, there are currently 95 outpost camps located on 46 lakes. Loonhaunt Lake which supports 10 outposts has the greatest concentration of camps in the district.

## CURRENT RESOURCE USE AND PROJECTIONS

### Anglers

Total annual angling harvest of sportfish from the North Arm, South Arm and Redgut Bay of Rainy Lake was 23,422 kg, 35,099 kg and 14,972 kg respectively in 1984 (Table 2). Harvests of walleye, northern pike, smallmouth bass and crappie harvests were 33,776, 26,837, 7,817 and 5,063 kg respectively (Table 3). Non-residents account for 41.5% percent of the total sportfish harvest on Rainy Lake. Angler-days generated by resident and non-resident anglers are 8,928 and 55,301 respectively. Resident and non-resident effort (angler-days) and harvest are expected



TABLE 2: CURRENT HARVEST LEVELS BY USER GROUP

LAKE/ BASIN	SPECIES	NATIVE SUBSIST HARVEST (KG/YR)	SPORT HARVEST (KG/YR)	COMMERCIAL HARVEST (KG/YR)	TOTAL HARVEST (KG/YR)	POTENTIAL YIELD (KG/YR)
		RES	NONRES			
RAINY LAKE N. ARM	WALLEYE	4606	329	2438	6610	13983
	N. PIKE	4606	1592	11786	28347	26807
	WHITEFISH	4606			6136	20372
	SM BASS	773	663	4913	10742	20372
	SM BASS/CRAPPIE				6349	
	CRAPPIE	773	202	1499	7541	28950
	PERCH					10722
	TOTAL	15364	2786	20636	48634	87420
RAINY LAKE S. ARM	WALLEYE		3135	19423	8332	30890
	N. PIKE		1425	8821	7156	17402
	WHITEFISH				18182	11813
	SM BASS		226	1394		18182
	SM BASS/CRAPPIE				1620	11813
	CRAPPIE		94	581	600	16788
	PERCH					6218
	TOTAL		4880	30219	34270	69369
RAINY LAKE EDGUT BAY	WALLEYE		1301	7150		8451
	N. PIKE		495	2718	1000	4213
	WHITEFISH				2600	4017
	SM BASS		97	524		2600
	SM BASS/CRAPPIE				621	4017
	CRAPPIE		413	2274	3182	5708
	PERCH					2114
	TOTAL		2306	12666	6782	21754
RAINY LAKE TAL	WALLEYE	4606	4765	29011	14942	53324
	N. PIKE	4606	3512	23325	36503	67946
	WHITEFISH	4606			26918	36202
	SM BASS	773	986	6831		31524
	SM BASS/CRAPPIE				8590	36202
	CRAPPIE	773	709	4354	11323	51446
	PERCH					19054
	TOTAL	15364	9972	63521	89686	178543
DISTRICT LAKES (INCLUDING RAINY LAKE)	LAKE TROUT		7098	37856		44954
	WALLEYE	3154	17275	117669	2156	140254
	N. PIKE	3154	9828	65455		79831
	WHITEFISH	3154			18185	95855
	SM BASS	262	5916	39103		21339
	SM BASS/CRAPPIE				45281	34427
	CRAPPIE	263				41720
	PERCH				263	21526
	TOTAL	9987	40117	260083	21735	331922
DISTRICT LAKES	LAKE TROUT		7098	37856		44954
	WALLEYE	7760	22040	146680	17098	193578
	N. PIKE	7760	13340	88780	37897	147777
	WHITEFISH	7760			45103	132057
	SM BASS	1035	6902	45934		52963
	SM BASS/CRAPPIE				53871	70629
	CRAPPIE	1036	709	4354	11323	93166
	PERCH					40580
	TOTAL	25351	50089	323604	111421	510465
						505644

WALLEYE STOCKS OF THE N. ARM, RAINY LAKE ARE CONSIDERED OVER-EXPLOITED BECAUSE THEY  
ARE CURRENTLY UNABLE TO ACHIEVE THEIR ESTIMATED POTENTIAL YIELD.



TABLE 3: PROJECTED HARVEST LEVELS BY USER GROUP

\* DALLEY STOCKS IN THE N. ARM. RAINY LAKE ARE CONSIDERED OVER-EXPLOITED BECAUSE THEY ARE CURRENTLY UNABLE TO ACHIEVE THEIR ESTIMATED POTENTIAL YIELD.



to remain at 1984 levels to the year 2000 (Table 3, Table 4) due to the implementation of a Crown Land Recreation program and an angler validation tag system.

Total annual sportfish harvest by anglers from other district lakes is currently estimated to be 300,200 kg (Table 2). Estimated lake trout, walleye, northern pike and smallmouth bass harvests are 44,954, 140,254, 79,831 and 45,544 kg respectively. Non-resident anglers account for 86 percent of the harvest on district lakes. Angler-days generated by residents and non-residents are 49,072 and 330,699 respectively. Resident effort (angler-days) and harvest from district lakes is expected to remain at the current level to the year 2000 (Table 3, table 4) due to decreases in local residents and increased leisure time. Non-resident effort (angler-days) and harvest is expected to increase by 25 percent to the year 2000 based on past effort data.

#### Commercial Fishing (Bait)

The average reported baitfish harvest for 1978 through 1984 is 242,521 dozen. Since the number of anglers is expected to increase to the year 2000, the demand for baitfish is expected to increase to 270,250 dozen. This estimate assumes a baitfish utilization level of 0.5 dozen per angler day applied to the projected increase in angler-days (540,500) to the year 2000.

#### Commercial Fishing (Food)

Commercial harvests from Rainy Lake currently totals 89,686 kg (Table 2). The commercial fishery accounts for 41% of the annual sportfish harvest from Rainy Lake. This harvest level is expected to remain stable to the year 2000. Commercial harvests from other district lakes currently totals 21,735 kg. This harvest level is expected to remain stable to the year 2000 (Table 3).

#### Native Subsistence Harvest

Current and projected harvests were determined by use of an annual fish consumption rate per individual of 18 kg which was determined through discussion with the chiefs of the various reserves. Harvests from Rainy Lake were assumed to be comprised of walleye (30%), northern pike (30%), whitefish (30%), smallmouth bass (5%) and crappie (5%). Harvests from other lakes were assumed to be comprised of walleye (30%), northern pike (30%), whitefish (30%), smallmouth bass (2.5%) crappie (2.5%) and lake sturgeon (5%). On this basis, native people in the Fort Frances district currently harvest 10,758 and 6,833 kg of sportfish per year from Rainy Lake and other district Lakes respectively (Table 2).

The native population is expected to increase from 1,437 to 2,242 by the year 2000. Subsistence harvests on Rainy Lake are expected to increase by 23% to 23,976 kg/yr (Table 3). Subsistence harvests on other district lakes is expected to increase to 15,561 kg/yr.



## TARGET TESTING

Fisheries management targets, as described in the District Land Use Guidelines (DLUG), outline overall program strategies. To provide a basis for refinement of these targets the following methodology was used:

- (i) The potential yield for all District lakes was calculated;
- (ii) The current use for subsistence, sport and commercial fisheries was determined using the best available data;
- (iii) The projected use for subsistence, sport and commercial fisheries was determined using projected population estimates for the subsistence and sport fisheries and current quotas for the commercial food fishery;
- (iv) Angler-days were calculated using a catch standard of 2.0 kg/angler-day applied to the projected increases or decreases in angler harvests (harvest/2.0);
- (v) The District Land Use Guideline targets, projected use and angler-days were compared.

The results of this process are shown in Table 5. To ensure understanding of the summarization provided by this table it is necessary to define the potential yield values that are used. The total district potential yield for all species is 626,813 kg/yr. With the exception of baitfish, targets developed during the district land use planning process pertain only to sportfish (lake trout, walleye, northern pike, smallmouth bass and crappie). Therefore, only the potential yield (395,335 kg/yr) for these species is considered in the target testing process. Table 5 summarizes current and projected uses, potential yields and targets and provides the means for making comparisons on a district wide basis. The most significant comparisons to be made in this table are between potential yields and projected uses. While the significance of Rainy Lake is recognized, targets specific to this lake were not developed during the district land use planning exercise.

Subsistence fishing has been included in the target testing process because it is necessary that subsistence needs be recognized. Estimated subsistence harvests of sportfish will increase to 25,821 kg by the year 2000. Approximately 55% of the harvest will come from Rainy Lake.

The DLUG target for the commercial harvest of sportfish, 73,000 kg/yr, was established prior to the development of a species specific quota system which was part of the provincial commercial fishery modernization program. The current commercial harvest figure for the District of 54,995 kg reflects the quota initiative which occurred in 1983. The projected commercial harvest of sportfish is not expected to increase over the next 20 years but there are a number of problems associated with the commercial fishery at the current quota levels. These problems occur primarily on Rainy Lake where the fishery accounts for 51,445 kg of the total commercial harvest of sportfish. Optional management strategies will be directed towards the solution of problems associated with the achievement of harvests to quota level over the long term.



TABLE 4: CURRENT AND PROJECTED USE SCHEDULED DATES BY SUBJECT AUTHOR

RAIUY LAKE		OTHER DISTRICT LANEJ			ALL LAKES				
	RES	NON-RES	TOTAL	RES	NON-RES	TOTAL	RES	NON-RES	TOTAL
CURRENT USE (ANGLER DAYS)	6928	55301	64229	49072	30699	379771	58000	386000	444000
PROJECTED USE (ANGLER DAYS)	6928	55301	64229	49072	42199	476271	58000	482500	540500

TABLE 5: TARGET TESTING FOR EAST FRANCIA DATES + 20

FISHERY	CURRENT USER KG ANGLER DAYS	DUG TARGET KG ANGLER DAYS	PROJECTED USE KG ANGLER DAYS	POTENTIAL YIELD KG ANGLER DAYS
<b>COMMERCIAL FISHING - BAIT</b>				
(DOZENS)	242521	244000	270250	
SUBSISTENCE FISHING				
TOTAL	17591		27431	
COMMERCIAL FISHING - FOOD				
TOTAL	54995	73000	54995	
REPORT FISHING				
LAKE TROUT				
TOTAL	44954	20080	11-34000	
OTHER SPORTFISH				
TOTAL	328739	423920	296-319000	
ALL SPORTFISH				
TOTAL	373693	444000	330000	165000
ALL USERS - EXCLUDING BAITFISH				
TOTAL	446779	444000	403000	165000
NOTE: Sportfish includes lake trout, walleye, northern pike, smallmouth bass, crappie, bluegill, yellow perch, white sucker, channel catfish, muskellunge, lake whitefish, lake trout target based on a sustainable yield of 0.25-0.75 kg/kg of coldwater days				
DUG LAKE TROUT				
TOTAL	510500	535932	395355	197668



The baitfish target established through the land use planning exercise was based on past harvest levels. The projected harvest to the year 2000 of 270,250 dozen was developed through a model which related angler demand and baitfish harvest. Problems and strategies for managing the baitfish fishery to the year 2000 will be discussed in light of the projected harvest.

The DLUG harvest target figures for lake trout were derived from partial estimates of the districts potential yield hence the range from 11 - 34,000 kg/yr. The data now available has allowed for a more precise estimate of this potential. However, the current and projected harvests exceed the capability of district waters to produce this species. Because of the sensitivity of the species to exploitation there is an immediate need to align harvests with potential yield. Discussion of the problems and strategies related to the management of lake trout will focus on management at the potential yield level.

Similarly, current and projected harvests indicate that over-harvesting of other sportfish is occurring. It should be noted that over-harvesting on a district basis is species specific; for example is more acute on preferred species such as walleye. To ensure the long term viability of the sportfish fishery the discussion of problems and optional management strategies will focus on the alignment of harvests with potential yields.

The DLUG planning exercise suggests the use of 2.0 kg of sportfish per angler-day as an appropriate quality standard. Given the districts potential to produce fish (395,335 kg/yr), using this quality standard means a significant reduction in angler days below current use. This quality standard is an issue that should be dealt with in the overall management framework.

## PROBLEMS

An overview of basic problems related to the achievement of specific targets is needed so that effective strategies can be developed which will form the basis of future management.

The problems of immediate concern within the 20 year planning framework in the Fort Frances district can be grouped into four broad categories:

- i) Loss of fish and fishing opportunities: Harvesting above the biological capability of a waterbody to produce fish over the long term (over-exploitation) results in a degraded fish community. The benefits such as quality fishing and fishing opportunities derived from degraded fish communities are lowered.
- ii) Loss of Environmental Quality: Degraded aquatic habitats can impact fisheries in a number of ways. Overall production capability can be reduced and/or community imbalances can occur. Both can result in a reduction in sport and commercial species.
- iii) Conflicts Among Users of the Fisheries Resources: Conflicts occur basically as a result of competition for the available fisheries resources.



(iv) Loss of Aesthetics: The loss of aesthetics is of concern but it is difficult to define because it is, to some extent, a matter of personal preference. However, such things as natural setting, remoteness and the quality of fishing are recognized as being important elements of the angling experience.

There are other problems which indirectly affect how fisheries resources are managed. They tend to be less obvious to the public but will nevertheless be addressed over the planning period. For example, deficiencies in fisheries science and technology, communications among resource agencies and public awareness.

#### Commercial Fish Target

Problems related to the achievement of the commercial fish target are summarized in Table 6. The commercial fishery in Fort Frances District can be categorized into two groups; those which depend on coarse fish such as sturgeon and whitefish and those which depend on sportfish species such as walleye and northern pike. The gross revenue of the fishery approximated \$132,000 in 1984. At present there is little demand for coarse fish by other user groups. The quotas for these fish species are based on historical catch and are subject to adjustment according to trends in abundance. Commercial fisheries on lakes other than Rainy Lake harvest primarily coarse fish (whitefish); the quotas are small and this species is not in demand by other user groups. The district is not aware of problems related to these fisheries at this time. In contrast, the whitefish harvest on the South Arm of Rainy Lake is currently above potential yield but it is not considered a threat to long term fishing opportunities but this situation bears monitoring.

The commercial harvest of walleye and northern pike outside of Rainy Lake is limited to Namakan Lake which accounts for 6.5% of the total commercial harvest of sportfish. While these species are in demand by other user groups the district is not aware of any conflicts between users on Namakan Lake. On the other hand, the commercial fishery on Rainy Lake accounts for 41% of the sportfish harvest. Walleye and northern pike which are the primary species are also in demand by anglers and the subsistence fishery. The current and projected harvest of these species by all users exceeds the potential yield and thereby jeopardizes fish stocks and future fishing opportunities. Crappie which are also harvested by the commercial fishery of Rainy Lake, but which is not traditionally considered a sport species, is becoming more popular with anglers. According to current data crappie appear to be in surplus. Crappie are a recent introduction to Rainy Lake and seem to be replacing walleye in the fish community. The relationship between walleye and crappie is not well understood but interactions between the two species could further stress the walleye resource.

As far as the district is aware, habitat related concerns for commercially fished lakes, other than Rainy Lake, are virtually non-existent at this time. On Rainy Lake there are localized habitat problems related to the degradation of spawning habitats particularly for walleye in the North Arm. The extent to which these habitat problems influence the status of walleye stocks is unknown at this time.



### Baitfish Target

Presently the harvest of baitfish appears to satisfy the demand for bait in the district. However, there have been a number of instances in which tourist outfitters have indicated that the baitfish industry has been unable to supply their needs. Over the years this has resulted in the issuance of lake specific licences, an action which has generated mixed reaction within the baitfish industry. Although the harvest of bait from individual baitfish blocks is unregulated the total harvest appears to have been relatively stable over the last few years. Harvests are projected to increase but this increase is not considered to be significant in terms of district waters ability to produce baitfish. There is a need however, to continue monitoring harvests through annual returns. In addition, the district has considered an independent assessment to establish baseline harvest levels. This need would be minimized if some baitfishermen were more aware of the significance of baitfish returns as a monitoring tool.

There are really no user conflicts because of the block system. However, there is a demand for more licences but the district has taken the position of not subdividing any more baitfish blocks. This position was adopted primarily because harvests have remained relatively stable and baitfish demand appears to be met.

Baitfishermen have a concern that the production of baitfish may be compromised as the result of timber harvesting activities in the vicinity of baitfish lakes. The relationship between treed shorelines and the status of baitfish is unknown.

Problems related to the achievement of the baitfish target, as discussed above, are summarized in Table 6.

### Lake Trout Target

The history of lake trout exploitation in the district has paralleled the history of access development. Prior to 1971 the majority of lake trout lakes were accessible only by aircraft or water. Tourist lodges and outpost camps were the main sources of non-resident angling pressure. From 1971 to 1984 exploitation increased each year as the network of resource extraction roads expanded. The advent of snowmobiles allowed access to almost all lakes in winter. Currently, all lake trout lakes are used by anglers, some receiving greater use than others, with the majority of the harvest being attributable to non-residents. Lake trout angling pressure is more widely distributed now than it was 20 years ago due to access road development. Lake trout populations are extremely sensitive to exploitation due to their unique biological characteristics and the limnological characteristics of the lakes in which they exist.

The most significant lake trout management problems are related to harvests which exceed the capability of district waters to produce trout (Table 7). Continued harvesting at these levels, particularly in view of the sensitivity of this species to exploitation, will compromise the lake trout resource and fishing opportunities in the



TABLE 6: PROBLEMS RELATED TO THE ACHIEVEMENT OF THE COMMERCIAL FISH AND BAITFISH TARGETS

PROBLEM DESCRIPTION	TARGET
<ul style="list-style-type: none"> <li>- RAINY LAKE</li> <li>- THE CURRENT AND PROJECTED HARVESTS OF WALLEYE BY ALL USERS EXCEEDS THE POTENTIAL YIELD AND THEREBY JEOPARDISES THESE POPULATIONS AND FUTURE FISHING OPPORTUNITIES.</li> <li>- CRAPPIE ARE A RECENT INTRODUCTION TO RAINY LAKE AND SEEM TO BE REPLACING WALLEYE IN THE FISH COMMUNITY. THE RELATIONSHIP BETWEEN WALLEYE AND CRAPPIE IS NOT WELL UNDERSTOOD AND INTERACTIONS BETWEEN THE TWO SPECIES COULD FURTHER STRESS WALLEYE POPULATIONS.</li> <li>- SEVERAL USER GROUPS CURRENTLY COMPETE FOR LIMITED WALLEYE AND NORTHERN PIKE RESOURCES. PROJECTED INCREASES IN DEMAND MAY INTENSIFY USER CONFLICTS.</li> <li>- THERE ARE LOCALIZED HABITAT PROBLEMS RELATED TO THE DEGRADATION OF SPANNING HABITATS PARTICULARLY FOR WALLEYE IN THE NORTH ARM. THE EXTENT TO WHICH THESE HABITAT PROBLEMS INFLUENCE THE STATUS OF WALLEYE POPULATIONS IS UNKNOWN AT THIS TIME.</li> </ul>	COMMERCIAL FISH
<ul style="list-style-type: none"> <li>- ALL LAKES</li> <li>- ANNUAL BAITSFISH HARVESTS NEED TO BE ACCURATELY QUANTIFIED THROUGH MONITORING.</li> <li>- AWARENESS BY BAITSFISHERMEN OF THE SIGNIFICANCE OF ANNUAL RETURNS AS A MONITORING TOOL WOULD REDUCE THE NEED FOR INDEPENDENT HARVEST ASSESSMENT.</li> <li>- THE DEMAND FOR BAITSFISH LICENCES EXCEEDS THE AVAILABILITY OF BAITSFISH BLOCKS.</li> <li>- BAITSFISHERMEN ARE CONCERNED THAT THE PRODUCTION OF BAITSFISH MAY BE COMPROMISED AS A RESULT OF TIMER HARVESTING ACTIVITIES IN THE VICINITY OF BAITSFISH LAKES. THE RELATIONSHIP BETWEEN TREED SHORELINES AND THE STATUS OF BAITSFISH IS UNKNOWN.</li> <li>- THERE IS THE QUESTION OF THE CAPABILITY OF THE BAITSFISH INDUSTRY TO SATISFY SPECIFIC TOURIST OPERATOR REQUIREMENTS AND THE NEED TO PROVIDE AN APPROPRIATE FORUM FOR DISCUSSIONS BETWEEN THE TWO INDUSTRIES.</li> </ul>	BAITSFISH



TABLE 1: PROBLEMS RELATED TO THE ACHIEVEMENT OF THE LAKE TROUT AND SPORTFISH TARGETS

TARGET	PROBLEM DESCRIPTION
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#### LAKE TROUT

- LAKES OTHER THAN RAINY LAKE
  - THE MOST SIGNIFICANT PROBLEM IS RELATED TO HARVESTS WHICH EXCEED THE CAPABILITY OF DISTRICT WATERS TO PRODUCE TROUT. THE HIGH DEMAND FOR THIS SPECIES BY RESIDENT AND NON-RESIDENT ANGLERS ON ROAD ACCESSIBLE LAKES DURING THE SUMMER MONTHS HAS CONTRIBUTED TO THIS PROBLEM.

#### SPORTFISH

- IN LOCALIZED SITUATIONS WHERE TOURIST OUTFITTER OPERATIONS EXIST, THAT DEPEND ON THE LAKE TROUT RESOURCE, THERE IS EVIDENCE OF CONFLICTS BETWEEN THIS USER GROUP AND OTHER ANGLERS. BASICALLY, THIS PROBLEM IS RESULTANT FROM COMPETITION FOR LIMITED LAKE TROUT RESOURCES.
- THE ASPECT OF REMOTENESS IN THE ANGLING EXPERIENCE HAS CHANGED AS A RESULT OF INCREASED ROAD ACCESS. NATURAL SETTING AND REMOTENESS ARE TWO ASPECTS OF AESTHETICS WHICH ARE HIGHLY VALUED BY THE TOURIST INDUSTRY FOR THEIR CLIENTELE.
- LAKES OTHER THAN RAINY LAKE
  - CURRENT AND PROJECTED HARVESTS OF WALLEYE, SMALLMOUTH BASS AND CRAPPIE EXCEED THE POTENTIAL YIELD OF WATERBODIES OTHER THAN RAINY LAKE, OVER THE LONG TERM. THIS WILL COMPROMISE THESE RESOURCES AND FISHING OPPORTUNITIES DERIVED FROM THEM.
- CONFLICTS BETWEEN USERS, WHEN THEY OCCUR, ARE LIMITED TO SPECIFIC WATERBODIES. THESE CONFLICTS ARE RELATED, IN PART, TO THE RESIDENTS' PERCEPTION THAT ACCESS SHOULD BE AVAILABLE TO MOST WATERBODIES. CONVERSELY, THE TOURIST INDUSTRY PERCEIVES ACCESS AS BEING DETRIMENTAL TO VARIOUS ASPECTS OF THE RECREATIONAL OPPORTUNITIES THEY PROVIDE. CONFLICTS ARE RESULTANT FROM COMPETITION FOR LIMITED FISHERY RESOURCES.
- THE LOCAL SPORTSMAN'S CLUB HAS EXPRESSED CONCERN ABOUT THE POSSIBLE DEGRADATION OF STREAM HABITATS IN THE VICINITY OF ROAD CROSSING SITES.
- LOCALIZED HABITAT PROBLEMS MAY STILL OCCUR DESPITE PLANNING CONTROLS AS A RESULT OF INCOMPLETE INVENTORY DATA.
- THE ASPECT OF REMOTENESS IN THE ANGLING EXPERIENCE HAS CHANGED AS A RESULT OF INCREASED ROAD ACCESS; NATURAL SETTING AND REMOTENESS ARE TWO ASPECTS OF AESTHETICS WHICH ARE HIGHLY VALUED BY THE TOURIST INDUSTRY FOR THEIR CLIENTELE.
- RAINY LAKE
  - WALLEYE ARE HARVESTED AT LEVELS SIGNIFICANTLY ABOVE POTENTIAL YIELD. THE MAJORITY OF THESE HARVESTS ARE ATTRIBUTABLE TO NON-RESIDENT ANGLERS AND THE COMMERCIAL FISHERY.
- CRAPPIE ARE A RECENT INTRODUCTION TO RAINY LAKE AND SEEM TO BE REPLACING WALLEYE IN THE FISH COMMUNITY. THE RELATIONSHIP BETWEEN WALLEYE AND CRAPPIE IS NOT WELL UNDERSTOOD AND INTERACTIONS BETWEEN THE TWO SPECIES COULD FURTHER STRESS WALLEYE POPULATIONS.
- WALLEYE AND NORTHERN PIKE ARE IN DEMAND BY ANGLERS AND THE COMMERCIAL AND SUBSISTENCE FISHERIES. PROJECTED INCREASES IN THE HARVESTS OF THIS SPECIES WILL INTENSIFY CONFLICTS.
- THERE ARE LOCALIZED HABITAT PROBLEMS RELATED TO THE DEGRADATION OF SPawning HABITATS PARTICULARLY FOR WALLEYE IN THE NORTH ARM. THE EXTENT TO WHICH THESE PROBLEMS INFLUENCE THE STATUS OF WALLEYE POPULATIONS IS UNKNOWN AT THIS TIME.



future. The lack of trophy sized fish in some lakes provides evidence of the changing status of the resource. The high demand for this species by resident and non-resident anglers has contributed to the development of this problem. Resident anglers are sensitive to this problem and attribute a high degree of responsibility to non-residents. In terms of the economic benefits generated through non-resident angler usage of the lake trout resource the district recognizes the higher contribution of non-resident anglers using an Ontario base of operations (ie. tourist facilities, cottaging).

Because of the large number of lakes that are accessible the extent of conflicts between residents and non-residents is not readily apparent. However, in localized situations where tourist outfitter operations exist that depend on the lake trout resource, there is evidence of conflicts between this user group and other anglers. The tourist industry firmly believes that road access control is essential to the viability of their operations because it protects a sense of "remoteness" and ensures quality fishing opportunities.

Habitat degradation problems have been moderated by past management practices which have recognized the sensitivity of this species and have prevented timber extraction activities on shorelines adjacent to coldwater lakes. The district is unaware of habitat degradation problems with the possible exception of Lower Manitou Lake which may have depreciated spawning habitats due to bark deposition from past log driving activities.

In general, past management practices have moderated changes to the natural setting element of the angling experience. However, the aspect of remoteness has changed because of an increase in road access. Natural setting and remoteness are two aspects of aesthetics which are highly valued by the tourist industry for their clientele.

#### Sportfishing Target

Sportfishing on district lakes involves the harvest of walleye, northern pike, smallmouth bass and crappie. Crappie, while not traditionally considered as a sportfish species, have been included as a sportfish as they are increasing in importance in the angler creel. Non-residents comprise approximately 86% of the angling pressure on district waters and account for a large portion of the harvest, which at this time, is in excess of the potential yield. Anglers using District tourist services, primarily non-residents, generated a gross revenue of approximately \$20.2 million in 1984.

Harvest levels relative to the potential yield of certain species varies across the district. On lakes other than Rainy Lake, current and projected harvests of walleye, northern pike, smallmouth bass and crappie are at levels which will, over the long term compromise these resources and fishing opportunities. Yellow perch have not constituted a share of the angler creel and are available in many of the district



lakes. Similarly, walleye are harvested at levels significantly above the potential yield on Rainy Lake. Northern pike harvest levels suggests over-harvesting of this species but managers feel, that due to changes in fish community structure (ie. reduction in walleye populations) on Rainy Lake, there are more northern pike available than is indicated by the potential yield. This may not be true over the long term if rehabilitation of walleye populations is successful. The majority of these harvests are attributable to non-resident anglers and the commercial fishery. There is a surplus of smallmouth bass, crappie and yellow perch available to users.

The local sportsman's club has expressed concern about the degradation of stream habitats in the vicinity of road crossing sites. These problems are felt to be localized and have occurred prior to implementation of more intensive guidelines for the construction of resource extraction roads. Critical lake habitats have been protected through past management practices and the district is not aware of significant problems at this time. Localized problems may still occur despite planning controls intrinsic to the timber management planning process and are resultant from inventory data deficiencies. On Rainy Lake there are localized habitat problems related to the degradation of spawning habitats, particularly for walleye in the North Arm. The extent to which these habitat problems influence the status of walleye stocks is really unknown at this time.

Conflicts between user groups on waterbodies other than Rainy Lake, appear to be few at this time. When conflicts do occur they are limited to specific waterbodies and are related, in part, to the public's perception that access should be available to most waterbodies. The converse is true of the tourist industry which perceives access as being detrimental to various aspects of the recreational opportunities they provide. On Rainy Lake, walleye and northern pike are in demand by anglers and the commercial and subsistence fisheries. Currently the harvests of these species by all users exceeds the potential yield and as projected harvests increase conflicts will intensify.

Changes to the natural setting element of the angling experience have largely been mitigated through past management practices. However, changes in the aspect of remoteness have occurred as a result of increased road access. Natural setting and remoteness are two aspects of aesthetics which are highly valued by the tourist industry for their clientele.

A summarization of the problems discussed above is provided in Table 7.

#### OPTIONAL MANAGEMENT STRATEGIES

The following is a discussion of the optional management strategies presented in Tables 8 and 9. These strategies are related to the achievement of the DLUG targets through the solution of specific management problems. Only those strategies that were realistic and provided for complete or partial solution of a problem were considered. The "do nothing" approach was not considered viable by the district as intensive resource use requires intensified management efforts.



TABLE 8: OPTIONAL MANAGEMENT STRATEGIES RELATED TO THE ACHIEVEMENT OF THE COMMERCIAL FISH AND BAITFISH TARGETS

TARGET	PROBLEM	OPTIONAL MANAGEMENT STRATEGIES
COMMERCIAL FISH	- CURRENT AND PROJECTED HARVESTS OF WALLEYE EXCEED THE POTENTIAL YIELD.	<ul style="list-style-type: none"> <li>- REDUCE THE HARVEST OF WALLEYE BY THE COMMERCIAL FISHERY AND MAKE UP SOME OF THE DEFICIT USING OTHER SPECIES.</li> <li>- MAINTAIN THE CURRENT LEVEL OF HARVEST AND REVISE THE DUG TARGET TO COINCIDE WITH THIS HARVEST.</li> </ul>

BAITFISH

- CRAPPIE ARE A RECENT INTRODUCTION TO RAINY LAKE AND SEEM TO BE REPLACING WALLEYE IN THE FISH COMMUNITY.
- PROJECTED INCREASES IN DEMAND FOR LIMITED WALLEYE AND NORTHERN PIKE RESOURCES MAY INTENSIFY USER CONFLICTS.
- ANNUAL BAITFISH HARVESTS NEED TO BE ACCURATELY QUANTIFIED THROUGH MONITORING.
- THERE IS A NEED TO INCREASE BAITFISHERMAN AWARENESS OF THE SIGNIFICANCE OF ANNUAL RETURNS AS A MONITORING TOOL.
- THE DEMAND FOR BAITFISH LICENCES EXCEEDS THE AVAILABILITY OF BAITFISH HARVEST BLOCKS.
- THERE IS CONCERN THAT THE PRODUCTION OF BAITFISH MAY BE COMPROMISED AS A RESULT OF TIMBER HARVESTING ACTIVITIES IN THE VICINITY OF BAITFISH LAKES.
- THERE IS THE QUESTION OF THE CAPABILITY OF THE BAITFISH INDUSTRY TO SATISFY SPECIFIC TOURIST OUTFITTER REQUIREMENTS.

1

- MAINTAIN THE CURRENT LEVEL OF LICENCING.
- SUBDIVIDE EXISTING BAITFISH BLOCKS TO ACCOMMODATE THE LICENCE FOR NEW LICENCES AND INCREASE THE NUMBER OF LAKE SPECIFIC LICENCES.
- SAME AS ABOVE

1

- CONTINUE TO PROVIDE PROTECTION TO LAKES KNOWN TO BE HARVESTED FOR BAITFISH THROUGH THE AREAS OF CONCERN CONCERN WITHIN THE TIMBER MANAGEMENT PLANNING PROCESS AND A COMMITMENT TO INTEGRATED RESOURCE MANAGEMENT.
- IDENTIFY THE RELATIONSHIP BETWEEN BAITFISH ABUNDANCE AND TIMBER HARVESTING ACTIVITIES IN THE VICINITY OF BAITFISH LAKES.
- IMPROVE COMMUNICATIONS BETWEEN THE BAITFISH AND TOURIST OUTFITTER INDUSTRY.



## Commercial Fish

Four basic problems have been identified with the attainment of the commercial fish target (Table 8). However, the principle and most immediate problem is the over-harvest of walleye. A reduction of the walleye harvest in Rainy Lake to the level of potential yield is the only appropriate approach but requires the support of all user groups. The question open for discussion at this point is which user group or groups will be involved in lowering their respective harvests. To adequately address this question requires consideration of the viability of commercial fish operations in relation to current use patterns and the economic return from the commercial fishery to Ontario. The commercial fishery has had a long history but the economic significance of the fishery in relation to the recreational fishery is much lower. An option is to reduce the harvests of walleye for other user groups to maintain the commercial harvest of walleye but such an approach may not be acceptable in light of economic relationships.

Increasing the harvest of alternative species such as crappie would reduce the demand for walleye on Rainy Lake and could assist in increasing walleye production to the level of potential yield. This presupposes the preference of user groups for walleye over crappie which may no longer be the case on Rainy Lake. In addition, it must be questioned if the commercial fishery can remain viable with the use of alternative species. Presently, the sale of walleye accounts for approximately 30% of gross revenue.

Conflicts between users, resultant from competition for limited fishery resources, would be reduced to some extent by concentrating user groups on alternative species particularly the commercial fishery.

To ensure that the potential yield of the walleye fishery is achievable it is necessary to maintain spawning habitats and rehabilitate those that are known to be degraded.

## Baitfish

There does not appear to be a problem with the attainment of the DLUG target (244,000 dozen) at this time and revision of the target upward is possible. However, should commercial returns indicate a downward trend in baitfish abundance some manipulation of the target and harvest would be necessary to ensure baitfish industry stability. At this time there does not appear to be a need to intensively regulate harvests.

There is a consistent demand for new baitfish licences as well as area specific licences for tourist operations which requires consideration of options to satisfy this demand or to limit licencing at the current level (Table 8). The industry should attempt to address whether or not it wants more licenced people involved in the baitfish industry in view of the projected increase in demand. It would seem reasonable therefore, to consider the economics of profit at existing licencing levels as it relates to the support of these additional fishermen as well as the ability of the industry to satisfy the specific needs of tourist operators.



TABLE 9: OPTIONAL MANAGEMENT STRATEGIES RELATED TO THE ACHIEVEMENT OF THE LAKE TROUT AND SPOTTED FISH TARGETS

## TARGET PROBLEM

LAKE TROUT - THE MOST SIGNIFICANT

CURRENT AND PROJECT

- THE POTENTIAL YIELD.

- IN LOCALIZED SITUATIONS WHERE TOURIST OUTFITTER OPERATIONS EXIST THERE IS EVIDENCE OF CONFLICTS BETWEEN THIS USER GROUP AND OTHER ANGLERS.

- THE ASPECT OF REMOTENESS IN THE ANGLING EXPERIENCE HAS CHANGED AS A RESULT OF INCREASED ROAD ACCESS.

- LAKES OTHER THAN RAINY LAKE - CURRENT AND PROJECTED HARVESTS OF WALLEYE, CRAPPIE AND SMALLMOUTH BASS EXCEED POTENTIAL VIDS

- CURRENT AND PROJECTED HARVESTS OF WALLEYE, CRAPPIE AND SMALLMOUTH BASS EXCEED POTENTIAL YIELDS.

- COLLECTING AND PRESERVING

- CONCERN HAS BEEN EXPRESSED OVER THE POSSIBLE DEGRADATION OF STREAM HABITATS IN THE VICINITY OF ROAD CROSSINGS
  - ANGERS OCCURS IN SPECIFIC SITUATIONS.

- THE ASPECT OF REMOTENESS IN THE ANGLING EXPERIENCE HAS CHANGED HAS A RESULT OF INCREASED ROAD ACCESS.

- RAINY LAKE  
- CURRENT AND PROJECTED HARVESTS OF WALLEYE  
EXCEED THE POTENTIAL YIELD.

- CRAPPIE ARE A RECENT INTRODUCTION TO RAINY LAKE AND SEEM TO BE REPLACING WALLEYE IN FISH COMMUNITY.

- PROJECTED INCREASES IN DEMAND FOR LIMITED WALEVE AND NORTHERN PIKE RESOURCES MAY INTENSIFY USER CONFLICTS.
  - LOCALIZED HABITAT PROBLEMS RELATED TO THE DEGRADATION OF SPANNING HABITATS PARTICULARLY FOR WALEVE IN THE NOKOMIS AREA.

- OPTIONAL MANAGEMENT STRATEGIES**

  - REDUCE THE ANGLER HARVEST OF TROUT THROUGH CONTROLS APPLIED TO ALL USERS (RESIDENTS, NON-RESIDENTS).
  - REDUCE THE ANGLER HARVEST OF TROUT THROUGH CONTROLS APPLIED TO SPECIFIC USERS (RESIDENTS, NON-RESIDENTS).

- CONTINUE TO MINIMIZE THE IMPACTS OF ROAD ACCESS ON AESTHETIC ASPECTS.

- REDUCE THE HARVESTS OF THESE SPECIES THROUGH CONTROLS ADDED TO THE HABITAT

- REDUCE THE HARVESTS OF THESE SPECIES THROUGH CONTROLS APPLIED TO SPECIFIC USERS

- IDENTIFY AND DESIGNATE LAKES FOR THE EXCLUSIVE USE OF THE TOURIST INDUSTRY.

- CONTINUED RECOGNITION AND PROTECTION OF AQUATIC HABITATS THROUGH THE ABFAS OF CONCERN CONCERN

- CONTINUE TO MINIMIZE THE IMPACTS OF ROAD ACCESS ON AESTHETIC VALUES THROUGH INPUT TO THE TIMBER

- REDUCE THE HARVEST OF WALLEYE THROUGH CONTROLS APPLIED  
TO SEE UGERS FROM

- REDUCE THE HARVEST OF WALLEYE THROUGH CONTROLS APPLIED TO SPECIFIC USES

- INCREASE THE HARVEST OF THIS SPECIES BY ALL USERS ABOVE THE LEVEL OF POTENTIAL YIELD FOR THIS SPECIES.

- ENCOURAGE THE HARVEST OF ALTERNATIVE SPECIES.



The district feels that the only feasible approach to the solution of baitfish habitat concerns at this time is the continued recognition and protection of known baitfish lakes through input to the timber management planning process. This is a conservative approach but does provide some time to investigate the relationship between baitfish abundance and timber harvesting activities on shorelines.

#### Lake Trout

Road accessible lake trout lakes receive more intensive angling pressure as a result of the ease in which access is achieved. Angling pressure on lakes without direct road access is just as difficult to control as anglers will generally find some way of accessing a lake. It is the districts opinion that there are more effective methods of controlling angling pressure and harvests than through the control of road access. Reduction in the harvest of lake trout to the level of potential yield through controls applied to all users will likely not be acceptable to resident anglers (Table 9). Because of their high expectations as the result of "birth right", resident anglers feel that access to most lakes should be permitted. Harvest controls applied to specific user groups are probably more appropriate but must consider the relative contribution of each user group to the over-harvest as well as the economic return to the province of Ontario. The highest economic return for non-residents is generated through their use of tourist facilities.

Effective harvest controls on the lake trout fishery will align harvests with potential yield thereby ensuring sustainable harvests and the provision of angling opportunities over the long term. The fact still remains that sharing of the lake trout resource means that anglers, other than those associated with tourist operations, will still be present on lakes which support tourist establishments. The tourist industry has suggested the designation of lakes specifically for tourism use with restricted access to other users. The factors which need to be considered are; the number of tourist outfitter lakes on which access can be effectively controlled and; the degree to which this strategy is acceptable to other user groups especially resident anglers.

Natural setting and remoteness are aspects of aesthetics which are of concern on all lake trout lakes. However, management strategies for the protection of aesthetic values are much more appropriate on lakes that are not road accessible. Presently, the timber management planning process recognizes tourism lakes and, where possible, limits road access. The restriction of access through this management strategy is contentious issue with resident anglers who feel the need to open access to more lakes.

#### Sportfish

Of the problems related to the achievement of the sportfish target the localized over-harvesting of specific species is of most concern to managers (Table 9). In the development of strategies to resolve this problem the district recognized that road access will occur as a result of resource extraction activities and that angler use of such



roads is inevitable. However, the district feels that there are more effective strategies to control harvests than through road access control. Of the strategies suggested, the use of user specific controls would appear to be the most appropriate especially from the point of view of resident anglers. Decisions related to harvest reductions within specific user groups will have to consider the relative contribution of each group to the over-harvest and the economic return to Ontario. In terms of economics, it is known that substantial benefits accrue to local communities and the province through non-resident use of tourist facilities.

The nature and extent of user conflicts varies within the district. On Rainy Lake, conflicts are confined to the subsistence fishery, commercial fishery and anglers. On other lakes, conflicts between tourist outfitters and anglers are more prevalent. All conflicts have their basis in user competition for limited fishery resources. However, tourist outfitters have indicated additional concerns related to the alteration of aesthetic values. To resolve these concerns the tourist industry has suggested the designation of lakes specifically for tourism use with restricted access to other users. Once again, the viability of this strategy to solve the problem will have to be considered in terms of the number of tourist outfitter lakes on which access can be effectively controlled and the degree to which this strategy is acceptable to resident anglers. Resolution of conflicts on Rainy Lake can be facilitated, in part, through the promotion of alternative species harvesting. The increased use of crappie would reduce demand on walleye populations and could assist in the elevation of walleye production to the level of potential yield. Encouraging the use of other waterbodies is an option whose viability is compromised by the fact that there does not appear to be sufficient resources on a district basis to satisfy projected demands particularly for walleye and northern pike.

To ensure that the potential yields of the various fisheries are achievable and sustainable over the long term it is necessary to maintain aquatic habitats and rehabilitate those that are degraded.

To reiterate, natural setting and remoteness are aspects of aesthetics which are of concern on all lakes. However, management strategies for the protection of aesthetic values is much more appropriate on lakes that are not road accessible. Presently, the timber management planning process recognizes tourism lakes and, where possible, limits road access. The restriction of road access, especially for the protection of tourism values is a contentious issue with resident anglers who feel the need to open access to more lakes.

#### Optional Management Tactics

Optional management tactics are specific things that could be carried out in order to implement a particular strategy. Not all of the tactics indicated in Tables 10, 11 and 12 need to be carried out to achieve specific strategy implementation. In some cases individual tactics or a combination of tactics will be sufficient to achieve the desired



TABLE 10: OPTIONAL MANAGEMENT TACTICS RELATED TO THE IMPLEMENTATION OF COMMERCIAL FISH STOCK/HAIFTISH MANAGEMENT STRATEGIES

STRATEGY	OPTIONAL MANAGEMENT TACTICS
TARGET (RAINY LAKE)	<ul style="list-style-type: none"> <li>- MAINTAIN THE CURRENT LEVEL OF WALLEYE HARVEST.</li> <li>- REDUCE THE HARVEST OF WALLEYE BY THE COMMERCIAL FISHERY AND MAKE UP SOME OF THE DEFICIT BY USING OTHER SPECIES.</li> <li>- REDUCE THE HARVEST OF WALLEYE BY ALL USER GROUPS.</li> <li>- ELIMINATE THE COMMERCIAL FISHERY FROM RAINY LAKE.</li> <li>- INCREASE THE HARVEST OF CRAPPIE.</li> <li>- REHABILITATE DEGRADED AQUATIC HABITATS.</li> <li>- IMPROVE COMMUNICATIONS WITH THE BAIFISH INDUSTRY TO IMPROVE THE QUALITY AND CONSISTENCY OF REPORTING.</li> <li>- MAINTAIN THE CURRENT LEVEL OF LICENCING</li> <li>- SUBDIVIDE EXISTING BAIFISH BLOCKS TO ACCOMMODATE DEMAND FOR NEW LICENCES.</li> <li>- CONTINUE TO PROVIDE PROTECTION TO LAKES KNOWN TO SUPPORT BAIFISH HARVESTING.</li> <li>- IDENTIFY THE RELATIONSHIP BETWEEN BAIFISH ABUNDANCE AND TIMBER HARVESTING ACTIVITIES IN THE VICINITY OF BAIFISH LAKES.</li> <li>- IMPROVE COMMUNICATIONS BETWEEN THE BAIFISH AND TOURIST INDUSTRIES.</li> </ul>

STRATEGY	OPTIONAL MANAGEMENT TACTICS
COMMERCIAL FISH	<ul style="list-style-type: none"> <li>- REDUCE THE HARVEST OF WALLEYE BY RESIDENT AND NON-RESIDENT ANGLERS AND THE SUBSISTENCE FISHERY.</li> <li>- GOVERNMENTAL PURCHASE OF WALLEYE QUOTAS.</li> <li>- TRADE WALLEYE QUOTAS FOR INCREASED CRAPPIE QUOTAS.</li> <li>- REDUCE COMMERCIAL WALLEYE QUOTAS AND IMPLEMENT SPECIFIC QUOTIFIES (IE CATCH LIMITS, MINIMUM SIZE LIMITS, TROPHY MANAGEMENT, SEASON CHANGES) ON OTHER USER GROUPS.</li> <li>- ELIMINATE COMMERCIAL FISHERIES THROUGH GOVERNMENTAL BUY-OUTS.</li> <li>- MOVE COMMERCIAL FISHERIES TO OTHER WATERBODIES.</li> <li>- TRADE WALLEYE QUOTAS FOR INCREASED CRAPPIE QUOTAS.</li> <li>- INCREASE THE INVOLVEMENT OF LOCAL ORGANIZATIONS IN THE COMMUNITY FISHERIES INVOLVEMENT PROGRAM (CCFP). THIS PROGRAM PROVIDES FUNDING TO GROUPS TO CONDUCT SPECIFIC AQUATIC HABITAT MANAGEMENT PROJECTS.</li> <li>- GREATER INVOLVEMENT OF FISHERIES MANAGERS WITH THE BAIFISH INDUSTRY THROUGH ATTENDANCE AT ASSOCIATION MEETINGS, BAIFISH OPERATION INSPECTIONS.</li> <li>- INCREASE ENFORCEMENT EFFORT REGARDING SUBMISSION OF ANNUAL RETURNS.</li> <li>- ESTABLISH A POLICY WHICH CURTAILS THE FURTHER ISSUANCE OF NEW BAIFISH LICENCES AND AREA SPECIFIC LICENCES.</li> <li>- IDENTIFY THOSE BLOCKS WHICH CAN BE SUBDIVIDED AND ELICIT INPUT FROM BAIFISHERMEN ON THE EXTENT TO WHICH SUBDIVISION WILL OCCUR.</li> <li>- CONTINUE TO MAKE INPUT TO THE TIMBER MANAGEMENT PLANNING PROCESS CONCERNING BAIFISH LAKES AND IMPROVE CURRENT KNOWLEDGE ON THE DISTRIBUTION OF LAKES SUPPORTING BAIFISH HARVESTING.</li> <li>- USE THE EXPERIMENTAL MANAGEMENT APPROACH APPLIED TO A SPECIFIC SERIES OF BAIFISH LAKES (CONTROL LAKES, LAKES WHERE TIMBER REMOVED FROM SHORELINE, COMPARE THE EFFECTS ON BAIFISH ABUNDANCE). THIS TACTIC WOULD INVOLVE THE BAIFISHERMEN TO A LARGE EXTENT.</li> <li>- PROVIDE THE MEANS BY WHICH THESE TWO GROUPS CAN ENTER INTO MEANINGFUL DISCUSSIONS CONCERNING THEIR NEEDS. INCLUSION OF BOTH INDUSTRIES IN ALL ASPECTS OF FISHERIES MANAGEMENT PLANNING. ENCOURAGE ATTENDANCE OF EACH INDUSTRY AT RESPECTIVE ASSOCIATION MEETINGS.</li> </ul>



\*\*\*\*\* ECONOMIC IMPACTS RELATED TO THE IMPLEMENTATION OF LAKE TROUT MANAGEMENT STRATEGIES

TARGET

\*\*\*\*\*

STRATEGY

\*\*\*\*\*

OPTIONAL MANAGEMENT TACTICS

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LAKE TROUT

- REDUCE THE ANGLER HARVEST OF TROUT THROUGH CONTROLS APPLIED TO ALL USERS.
  - CLOSE THE WINTER SEASON.
  - ESTABLISH AN ANNUAL CREEL LIMIT OF 7 TROUT.
  - REDUCE THE DAILY POSSESSION LIMIT TO 2 TROUT.
  - IMPLEMENT A LAKE TROUT STAMP FOR ALL ANGLERS.
  - APPLY GEAR RESTRICTIONS IN SPECIFIC SITUATIONS.
  - IMPLEMENT A QUOTA SYSTEM FOR LAKE TROUT STAMPS AND A LOTTERY.
  - LIMIT THE NUMBER OF LAKE TROUT STAMPS WITH AN ALLOCATION MECHANISM TO THE TOURIST AND NON-TOURIST INDUSTRY.
  - CLOSURE OF THE NON-RESIDENT WINTER SEASON.
  - ESTABLISH AN ANNUAL NON-RESIDENT CREEL LIMIT OF 7 TROUT.
  - REDUCE THE NON-RESIDENT DAILY POSSESSION LIMIT TO 2 TROUT.
  - APPLY GEAR RESTRICTIONS IN SPECIFIC SITUATIONS.
  - REQUIRE NON-RESIDENTS TO USE TOURIST FACILITIES WITH NO QUOTA ON LAKE TROUT STAMPS.
  - IMPLEMENT A QUOTA SYSTEM FOR LAKE TROUT STAMPS AND A LOTTERY.
  - IMPLEMENT A QUOTA SYSTEM FOR LAKE TROUT STAMPS WITH ALL STAMPS AVAILABLE THROUGH THE TOURIST INDUSTRY.
  - LIMIT THE NUMBER OF NON-RESIDENT LAKE TROUT STAMPS WITH AN ALLOCATION MECHANISM TO THE TOURIST AND NON-TOURIST INDUSTRY.
  - IDENTIFY THOSE TOURIST OUTLET LAKES WHERE ACCESS COULD BE EFFECTIVELY CONTROLLED.
  - CONTROL ACCESS TO OTHER USERS BY MEANS OF PHYSICAL CONTROLS IE. GATES, DITCHING, WINTER ROADS.
  - CONTROL ACCESS TO OTHER USERS THROUGH LEGISLATION.
  - CONTINUE TO MINIMIZE THE IMPACTS OF ROAD ACCESS ON AESTHETIC VALUES THROUGH INPUT TO THE TIMBER MANAGEMENT PLANNING PROCESS.
- CONTINUE TO MINIMIZE THE IMPACTS OF ROAD



TABLE 12: OPTIONAL MANAGEMENT TACTICS RELATED TO THE IMPLEMENTATION OF SPORTFISH MANAGEMENT STRATEGIES

TARGET  
SPORTFISH

STRATEGY

- REDUCE THE HARVESTS OF WALLEYE, CRAPPIE AND SMALLMOUTH BASS THROUGH CONTROLS APPLIED TO ALL USERS.

- REDUCE THE HARVESTS OF WALLEYE, CRAPPIE AND SMALLMOUTH BASS THROUGH CONTROLS APPLIED TO ALL USERS.

SPORTFISH

STRATEGY

- CLOSURE OF THE WALLEYE, CRAPPIE, BASS SEASONS.

SPORTFISH

STRATEGY



- REDUCE COMMERCIAL WALLEYE QUOTAS ON FAINY LAKE.

- IDENTIFY AND DESIGNATE LAKES FOR THE EXCLUSIVE USE OF THE TOURIST INDUSTRY.

- IDENTIFY TOURIST OUTFITTER LAKES WHERE ACCESS COULD BE EFFECTIVELY CONTROLLED.

- CONTROL ACCESS TO OTHER USERS BY MEANS OF PHYSICAL CONTROLS I.E. GATES, DITCHES, WINTER EGADS.

- CONTROL ACCESS TO OTHER USERS THROUGH LEGISLATION.

- INCREASE THE HARVEST OF CRAPPIE.

- ENCOURAGE THE HARVEST OF CRAPPIE.

- AS ABOVE.

- ENCOURAGE THE USE OF OTHER WATERBODIES.

- REHABILITATE DEGRADED AQUATIC HABITATS.

- INCREASE THE INVOLVEMENT OF COMMUNITY ORGANIZATIONS IN THE COMMUNITY FISHERIES INVOLVEMENT PROGRAM (CFIP). THIS PROGRAM PROVIDES FUNDING TO GROUPS APPROVED AQUATIC HABITAT MANAGEMENT PROJECTS.



result. It should be noted that the selection of a specific tactic often implies the use of additional tactics not specifically stated to ensure implementation. For example, the selection of a tactic to reduce walleye creel limits would require legislative changes and could require increased enforcement effort to ensure compliance.

#### PUBLIC REVIEW

The public is invited to review and comment on the background information, problems and issues, target testing and optional management strategies and tactics. Comment forms are provided upon which to record comments or concerns. Comments on this information will be received until December 20, 1985 at 5:00 pm. Your comments will be used in the preparation of a draft fisheries management plan which will also be made available for public review.



## APPENDIX 1



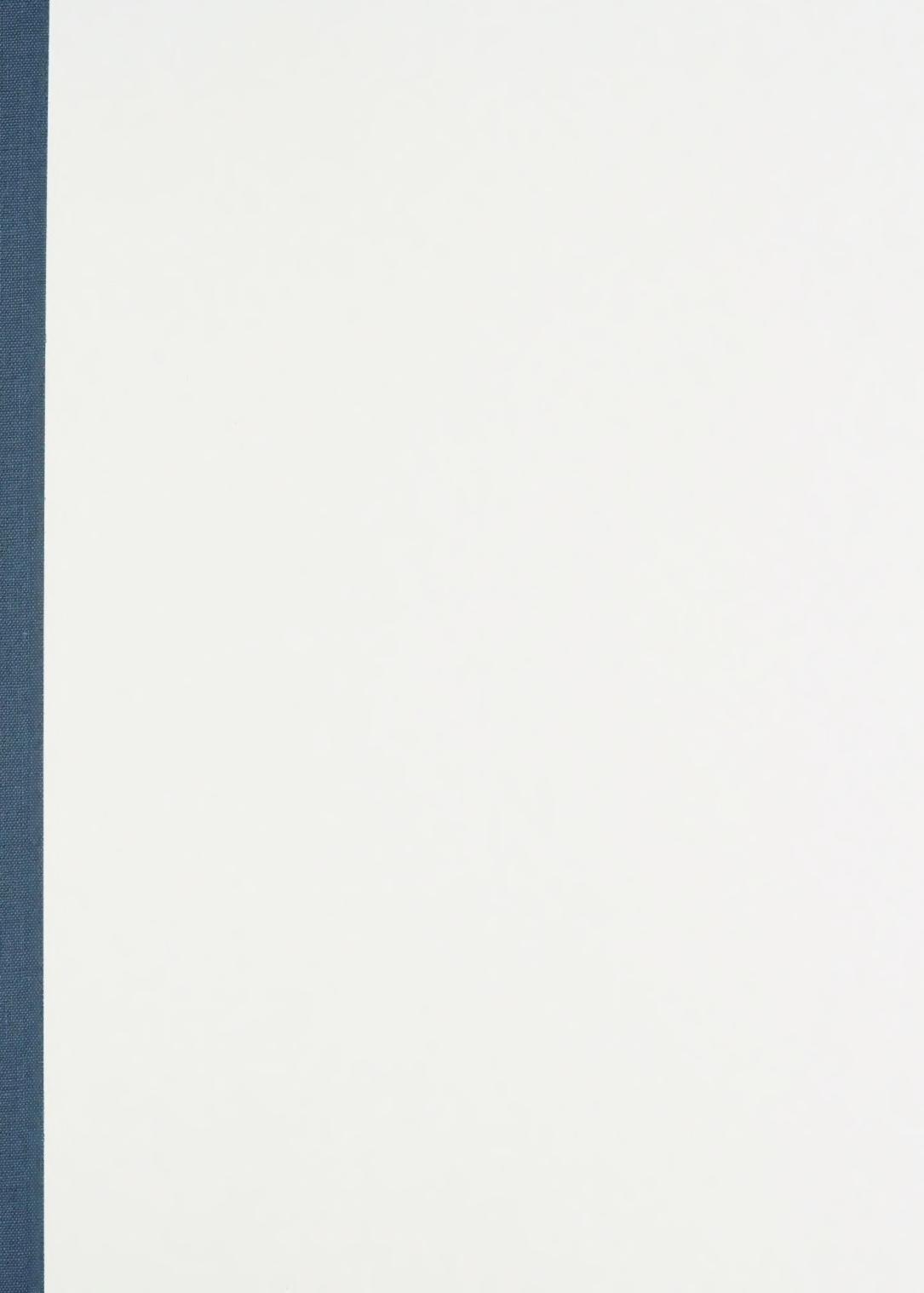


Ministry of  
Natural  
Resources

Hon. Vincent G. Kerrio  
Minister  
  
Mary Mogford  
Deputy Minister

**Fort Frances District  
Fisheries Management Plan  
C O M M E N T   S H E E T**





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